OMEGA PROTEIN®
Healthy Products for a Healthy World®

Memo

To: Jaime Bauer, DEQ Water Permit Writer

From: Bill Purcell, Environmental Manager Bill

CC: Joe Kadi, Monty Deihl, Denis Quick, Carl Hubeny

Date: January 12, 2011

Re: Refrigeration/Bailing Water

Per our discussion yesterday, Omega Protein, Inc. plans to continue to handle refrigeration water as we have in the past by pumping off in designated portions of the Bay prior to off loading the fish at the dock. Each fishing vessel takes on seawater prior beginning fishing operations and runs this water through its chillers lowering the water temperature to approximately 36° F. When caught, fish are pumped into the fish holds containing this refrigeration water. As the vessels continue to fish this water is circulated through the chillers maintaining the fish as fresh as possible for processing. Prior to off loading the fish at the dock the each vessel pumps refrigeration water off in the designated portion of the Bay. Years of sampling refrigeration water that we have submitted to DEQ demonstrated presence of nitrogen and BOD_5 at background levels.

For the 2011 season our plans are to continue hauling bailing water to federal waters in the Atlantic Ocean for disposal under the Ocean Dumping regulation fish waste exemption. Future plans are to install a waste heat evaporator in the 2012 season and evaporate all bailing water. The evaporator that we have selected is a TASTE evaporator. This technology we are currently using in our gulf plants and are familiar with their operation. A TASTE evaporator produces two condensate streams, "clean" condensate stream and a dirty condensate stream. The "dirty" stream is the condensate from the Dupps Dryers that is providing the waste heat for the evaporative process. This waste heat from the dryers is currently condensed and treated in our treatment system so there is no increase in the load to our treatment system. The clean evaporator condensate is the condensate from evaporation of the bailing water. This condensate is clean enough to use as boiler feed water which is how it is used in our gulf plants. To prevent potential safety problems with high conductivity boiler feed water a conductivity meter is placed in the condensate line and water that cannot be used safely is sent to waste treatment. Bailing water is made up of any residual refrigeration water in the fish holds, fresh water that is added to prime the fish pumps, and any liquids given up by the fish during pumping.